KENWOOD

STEREO CASSETTE TAPE DECK

KX-68W

INSTRUCTION MANUAL

KENWOOD CORPORATION

Introduction

Your choice of this product indicates that you are a devotee to excellence in sound reproduction.
We appreciate your patronage and take pride in the long tradition of quality components, that our company represents.
So that you can get the most out of your unit, we suggest that you take the time to read through this manual before you hook up and operate your system. This will acquaint you with operating features, and system-connection considerations, so that your listening pleasure will be enhanced right from the start.
You will notice that in all aspects of planning, engineering, styling, operating convenience and adaptability, we have sought to anticipate your needs and desires.
Keep this manual handy for future reference.

For your records

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on this product.
Model _____ Serial Number _____

Unpacking

Unpack the unit carefully and make sure that all accessories are put aside so they will not be lost.
Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage.
We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.

WARNING NOTICE:

IN MOST CASES IT IS AN INFRINGEMENT OF COPYRIGHT TO MAKE COPIES OF TAPES OR DISCS WITHOUT THE PERMISSION OF THE COPYRIGHT OWNERS. ANYONE WISHING TO COPY COMMERCIALLY AVAILABLE TAPES OR DISCS SHOULD CONTACT THE MECHANICAL COPYRIGHT PROTECTION SOCIETY LIMITED OR THE PERFORMING RIGHTS SOCIETY LIMITED.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol DD are trademarks of Dolby Laboratories Licensing Corporation.

Accessories

Audio cord × 2

System control cord × 1
(Except for European models)

for CANADA

DOC REGULATION

"THIS DIGITAL APPARATUS DOES NOT EXCEED THE CLASS B LIMITS FOR RADIO NOISE EMISSIONS FROM DIGITAL APPARATUS AS SET OUT IN THE RADIO INTERFERENCE REGULATIONS OF THE CANADIAN DEPARTMENT OF COMMUNICATIONS."

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Before applying power

⚠ Caution : Read this page carefully to keep your safety.

For the U.S.A. and Canada

Important!

Units shipped to the U.S.A. and Canada are designed for operation on 120 volts AC only.

For Australia and Europe

Important!

Units shipped to Australia are designed for operation on 240 V AC only.

Units shipped to Europe are designed for operation on 220 V AC only.

For other countries

Important!

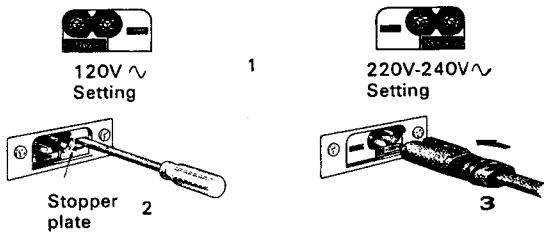
Units shipped to countries other than the above countries are equipped with an AC voltage selector switch on the rear panel. Refer to the following paragraph for the proper setting of this switch.

AC voltage selection

This unit operates on 110-120 or 220-240 volts AC. The AC voltage selector switch on the rear panel is set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches your line voltage. If not, it must be set to your voltage in accordance with the following direction.

Note:

Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC voltage selector switch.



1. Before plugging in this unit, make sure that the position of the AC Voltage Selector conforms to your line (mains) voltage. If not, it must be reset. See Figure 1.
2. To reset the selector, slide the stopper plate to the opposite side with a screwdriver or other pointed tool. See Figure 2.
3. Insert the power cord securely. See Figure 3.

For the United Kingdom

Important!

Units shipped to the U.K. are designed for operation on 240 volts AC only.

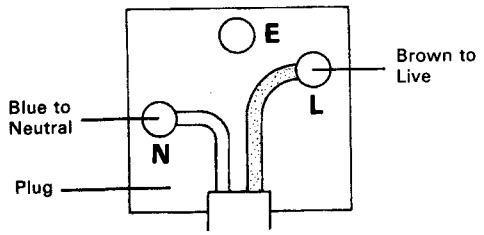
The mains plug must be removed from the wall socket prior to any internal examination.

The wires in this mains lead are coloured in accordance with the following code:

Blue	Neutral
Brown	Live

The wires in this mains lead must be connected to the terminals in the plug as follows:

Wire colour	**Plug terminal marking**
Blue	N or Black
Brown	L or Red



Notes:

1. If a 13-amp plug is used, this must be fitted with a 5- amp fuse.
2. If a 3-pin plug with earthing contact is used, no wire must be connected to the E terminal.

Safety precautions

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

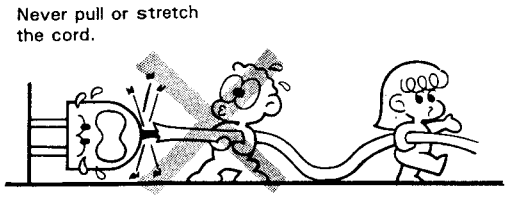
	CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
	THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.
	THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

IMPORTANT SAFEGUARDS ⚠ Caution Read this page carefully to keep your safety.

Please read all of the safety and operating instructions before operating this unit. For best results, follow all warnings placed on the unit and adhere to the operating and use instructions. These safety and operating instructions should be retained for future reference.

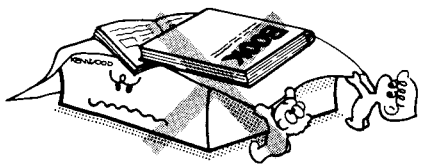
1. **Power sources** — The unit should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

2. **Power-cord protection** — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.

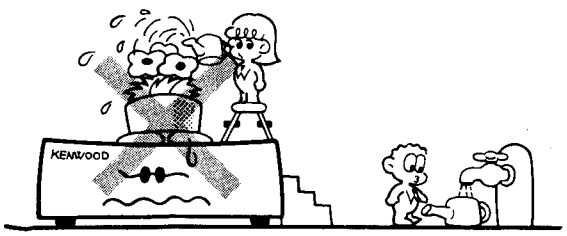


3. **Grounding or polarization** — The precautions should be taken so that the grounding or polarization means of this unit is not defeated.

4. **Ventilation** — The unit should be situated so that its location or position does not interfere with its proper ventilation.
To maintain good ventilation, do not put records or a table-cloth on the unit. Place the unit at least 10 cm away from the walls.
Do not use the unit on a bed, sofa, rug or similar surface that may block the ventilation openings.

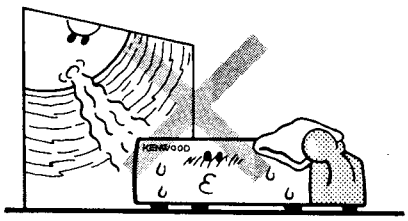


5. **Water and moisture** — The unit should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

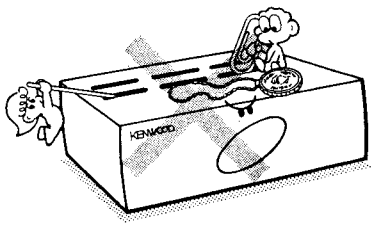


6. **Temperature** — The unit may not function properly if used at extremely low, or freezing temperatures. The ideal ambient temperature is above +5°C (41°F).

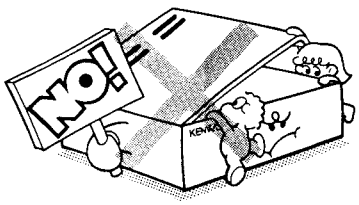
7. **Heat** — The unit should be situated away from heat sources such as radiators, heat registers, stoves, or other units (including amplifiers) that produce heat.



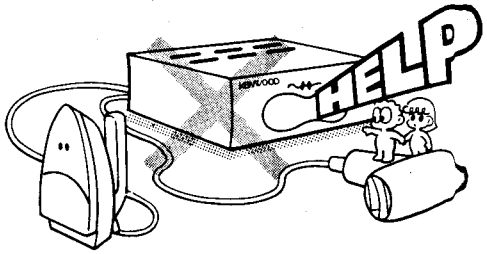
8. **Electric shock** — Care should be taken so that objects do not fall and liquid is not spilled into the enclosure through openings. If a metal object, such as a hair pin or a needle, comes into contact with the inside of this unit, a dangerous electric shock may result. For families with children, never permit children to put anything, especially metal, inside this unit.



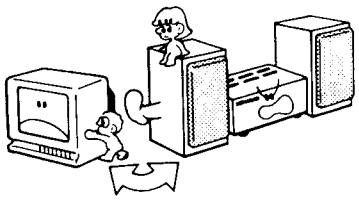
9. **Enclosure removal** — Never remove the enclosure. If the internal parts are touched accidentally, a serious electric shock might occur.



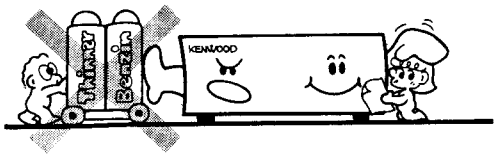
10. **AC outlets** — Do not connect other audio equipment with a power consumption larger than that specified to the AC outlet on the rear panel. Never connect other electrical units, such as an iron or toaster, to it to prevent fire or electric shock.



11. Magnetic fields — Keep the unit away from sources of magnetic fields such as TV sets, speaker systems, radios, motorized toys or magnetized objects.



12. Cleaning — Do not use volatile solvents such as alcohol, paint thinner, gasoline, or benzine, etc. to clean the cabinet. Use a clean dry cloth.

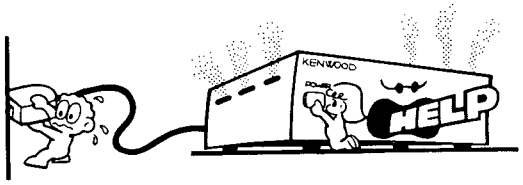


13. Carts and stands — An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

14. Nonuse periods — The power cord of the unit should be unplugged from the outlet when left unused for a long period of time.

15. Abnormal smell — If an abnormal smell or smoke is detected, immediately turn the power OFF and pull out the power cord. Contact your dealer or nearest service center.

POWER OFF!



16. Damage requiring service — The unit should be serviced by qualified service personnel when:

A. The power-supply cord or the plug has been damaged; or

B. Objects have fallen, or liquid has been spilled into the unit; or

C. The unit has been exposed to rain; or

D. The unit does not appear to operate normally or exhibits a marked change in performance; or

E. The unit has been dropped, or the enclosure damaged.

17. Servicing — The user should not attempt to service the unit beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

18. Outdoor antenna grounding — If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/ NFPA No. 70—1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure.

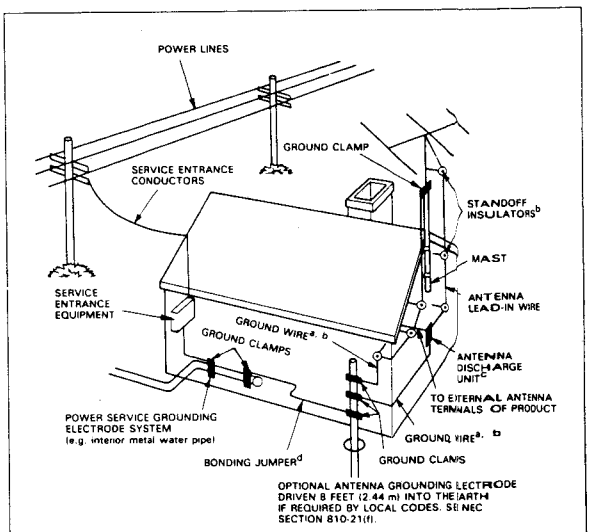

POWER LINES
GROUND CLAMP
SERVICE ENTRANCE CONDUCTORS
STANDOFF INSULATORS[b]
MAST
SERVICE ENTRANCE EQUIPMENT
ANTENNA LEAD-IN WIRE
GROUND WIRE[a, b]
GROUND CLAMPS
ANTENNA DISCHARGE UNIT[c]
TO EITERNAL ANTENNA TERMINALS OF PRODUCT
POWER SERVICE GROUNDING ELECTRODE SYSTEM (e.g. interior metal water pipe)
GROUND WIRE[a, b]
BONDING JUMPER[d]
GROUND CLAMPS
OPTIONAL ANTENNA GROUNDING ELECTRODE DRIVEN 8 FEET (2.44 m) INTO THE EARTH IF REQUIRED BY LOCAL CODES. SEE NEC SECTION 810-21(f).

FIGURE
EXAMPLE OF ANTENNA GROUNDING ACCORDING TO THE NATIONAL ELECTRICAL CODE INSTRUCTIONS CONTAINED IN ARTICLE 810 — "RADIO AND TELEVISION EQUIPMENT"

[a] Use No. 10 AWG (5.3 mm²) copper, No. 8 AWG (8.4 mm²) aluminum, No. 17 AWG (1.0 mm²) copper-clad steel or bronze wire, or larger, as a ground wire.

[b] Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 — 6 feet (1.22 — 1.83 m) apart.

[c] Mount antenna discharge unit as close as possible to where lead-in enters house.

[d] Use jumper wire not smaller than No. 6 AWG (13.3 mm²) copper, or the equivalent, when a separate antenna-grounding electrode is used. See NEC Section 810-21(j).

19. Power lines — An outdoor antenna should be located away from power lines.

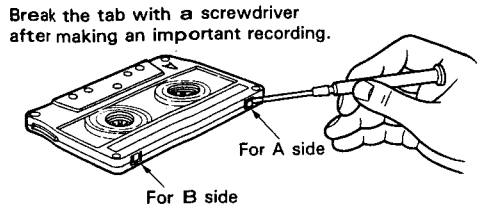
Notes:

1. **Item 3 is not required except for grounded or polarized equipment.**
2. **Item 10 is not required except for units provided with AC outlets.**
3. **Item 18 and 19 are not required except for units provided with antenna terminals.**
4. **Item 18 complies with UL-1270 in the U.S.A.**

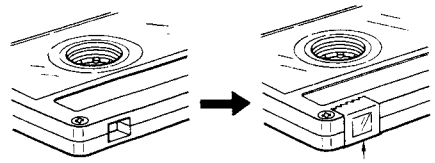
■ Cassette tape notes

Erase protection device

An erase proof detection notch is located on each side of the cassette to prevent the accidental erasure of important recordings. Break the tab after important recording to avoid accidental erasure or re-recording of the cassette tape. To re-record on the cassette tape, cover the notch with cellophane adhesive tape.



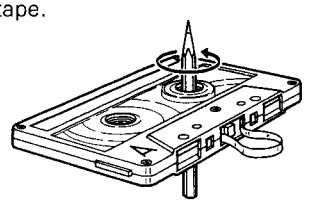
Erase protection device



To re-record

For tape slack

Insert a pencil into the hub and take-up the slack before using the tape.

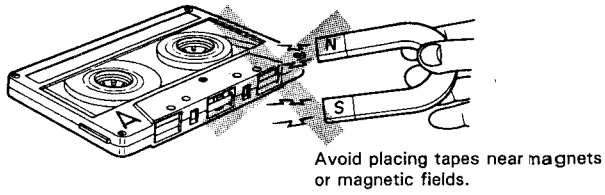


For tape slack.

Storage of cassette tapes

Avoid placing or leaving cassette tapes:

- In direct sunlight or near heating systems.
- Near magnets or magnetic fields, as erasure of important recordings will result.



Store cassette tapes with care

Note:

1. **The 120 minute cassette tapes are not recomended because they are too thin and may be damaged by repeated use.**
2. **The use of endless tape is not recomended as they may cause malfunction of the unit.**

■ Cleaning the head section

As the tape rubs against the heads during recording and playback, oxide debris from the tape accumulates on the heads, guides, and pinch roller. To maintain the optimum recording and playback performance, periodically clean the entire tape path, including the heads (about every 10 hours of use).

Cleaning the head section

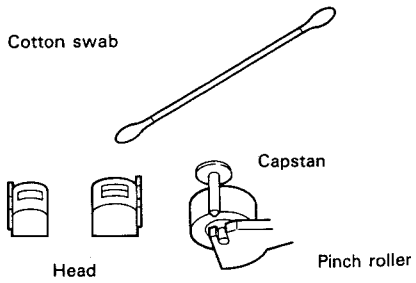
1. Press the EJECT button (▲) and the cassette holder will slide forward.
2. Clean the heads, pinch roller, and capstan with a cotton swab slightly dampened with cleaning solvent (or denatured alcohol).
   As there is a wide variety of commercially-available cleaning fluids, carefully read the instructions provided with your cleaning kit and use the appropriate type of fluid.

Note:

The heads and guides in the tape path are precisely adjusted. Do not exert excessive pressure on any parts while cleaning.

Head Demagnetization

A magnetized record/play head may degrade the sound quality and increase the noise. In this case, use the commercially available Head Eraser to demagnetize the head.



■ Beware of condensation

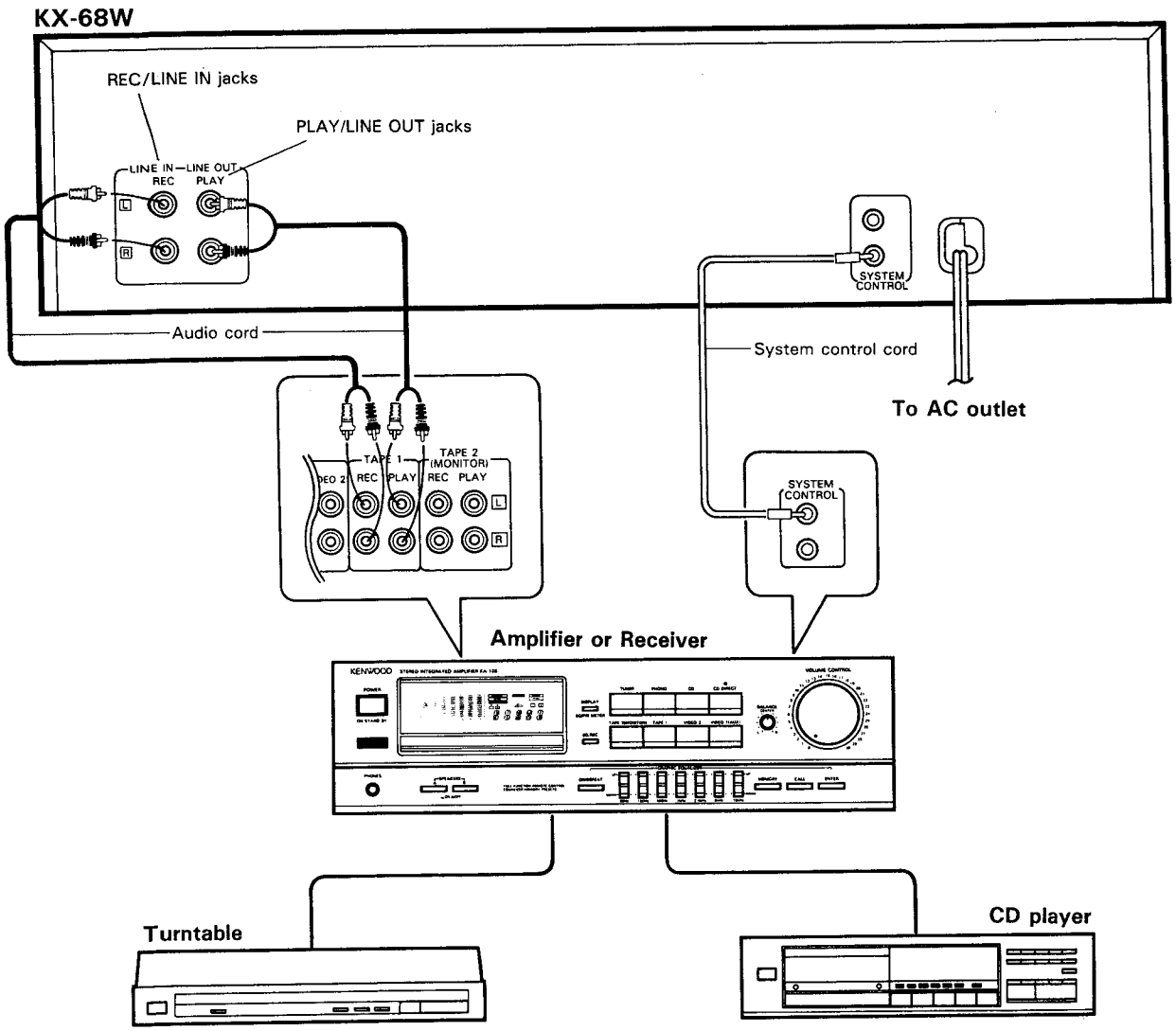
Water vapor in the air may condense on cold parts, forming "dew" on their surfaces.
For example, when a bottle is taken out of the refrigerator and brought into a warm room, droplets of water will form on the bottle surface. This phenomenon is called "condensation". If this occurs inside the unit, the player may operate incorrectly or may not function at all.
This is not a malfunction, however, the player should be left until it is dry. (Turn the power of this unit ON and leave the player for awhile. After several hours, even in the worst case, the player will stabilize and correct playback will be possible.)
Be especially careful in the following cases:

- When the unit is suddenly brought from a cold place to a warm place (causing rapid temperature change).
- When the temperature of the room is raised suddenly using a heater, etc.
- When the unit is brought from a well-cooled (air-conditioned) room in to a damp and hot room.
- In conditions where the temperature difference between the surroundings and this unit might cause condensation.

System connections

Connection to stereo amplifier or receiver

Before connecting, be sure to turn the POWER switches of each component OFF, then make connections as shown in the diagram below:



■ System control connections

When connected to an amplifier or receiver having KENWOOD System Control terminals, system operation such as remote control is made possible. For details, refer to the instruction manual of the amplifier or receiver.

If your amplifier or receiver is not equipped with SYSTEM CONTROL terminals, do not connect anything to any SYSTEM CONTROL terminal.

Do not connect the unit in any system configuration other than specified.

Controls and indicators

DUBBING indicators
(► NORMAL, ►► HIGH)

POWER indicator

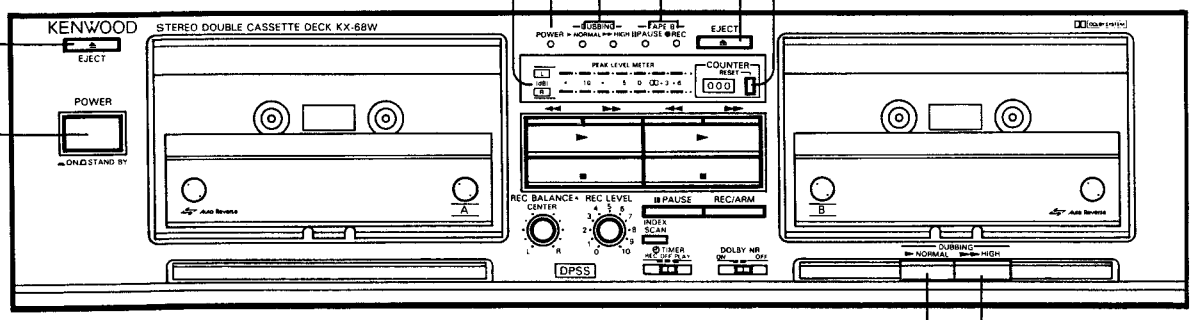
PEAK LEVEL METER

A deck EJECT button
Opens the cassette holder of A deck.

TAPE B indicators
(REC, PAUSE)

B deck EJECT button
Opens the cassette holder of B deck.

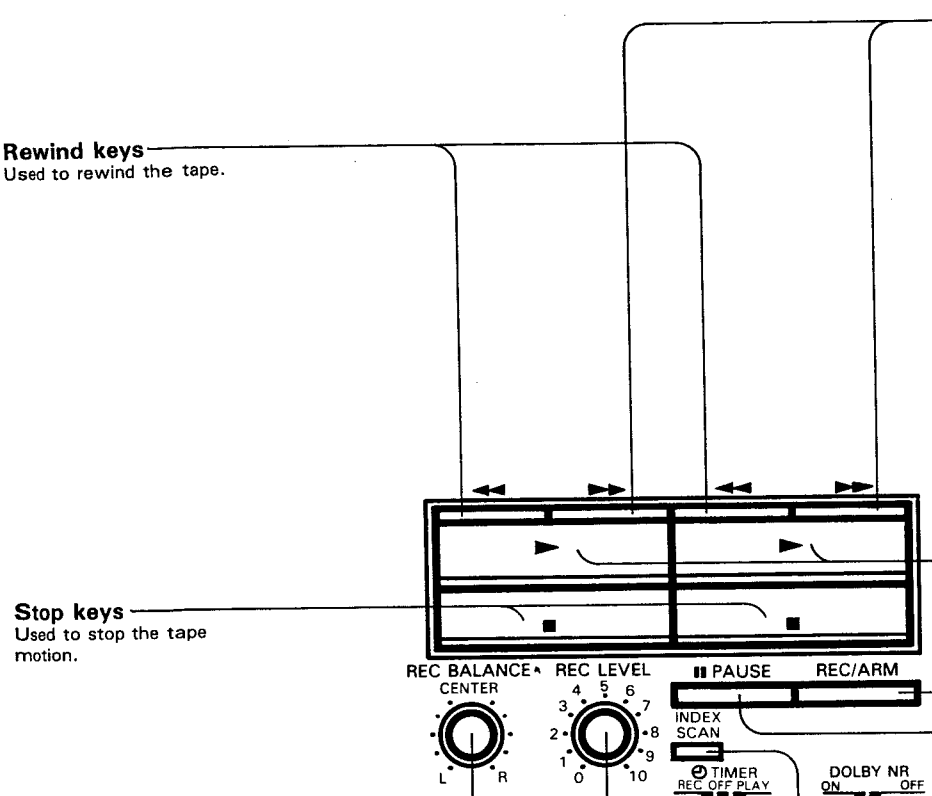
COUNTER/RESET key
Resets the counter to "000".



POWER switch
Press this switch to turn the power ON and OFF.

DUBBING keys
(► NORMAL, ►► HIGH)
Used when performing tape-to-tape dubbing.

Operation panel



Fast forward keys
Used to fast-forward the tape.

Rewind keys
Used to rewind the tape.

Play keys
Used to playback the tape in the forward direction.

REC/ARM key (B deck)
Press this key to start recording.

Stop keys
Used to stop the tape motion.

PAUSE key (B deck)
Press this key to stop the tape temporarily.

REC BALANCE knob
Adjust the recording level balance between the left and right channels with this knob.

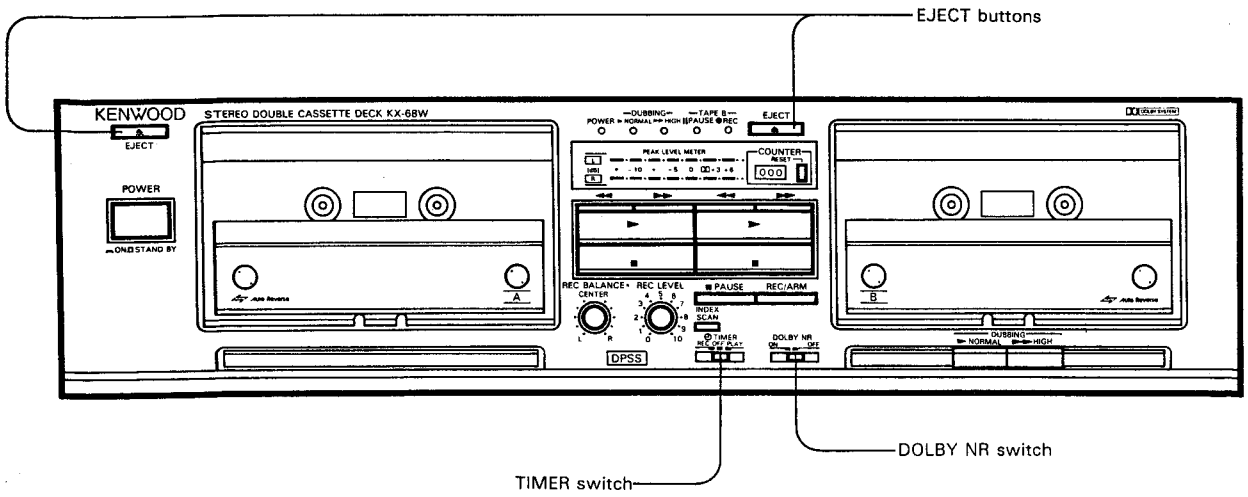
DOLBY NR switch
Select the OFF or ON Dolby noise reduction system setting with this switch.

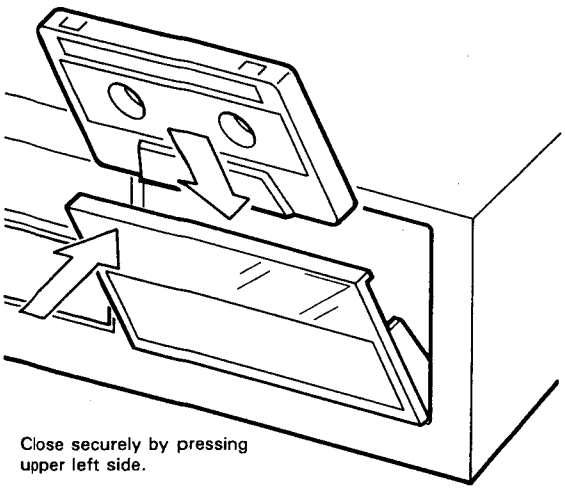
INDEX SCAN key (A deck)
Refer to page 11.

REC LEVEL knob
Adjust the recording level with this knob.

TIMER switch
Used when timer recording or timer playback is required.

Listening to cassette tapes





Close securely by pressing upper left side.

■ Tape playback operation

1. Set the deck's TIMER switch to OFF.

2. Press the EJECT (▲) button for the deck to be used for playback.

3. Insert a cassette and close the cassette holder securely.

- The optimum playback condition is set automatically according to the type of tape, i.e. Metal, chrome (CrO_2) or normal.

4. Set the DOLBY NR switch according to the NR mode of the cassette tape.

5. Press the play (►) key.

- The peak level meter lights in accordance with the contents of the tape.

■ Operation of fast forward and rewind

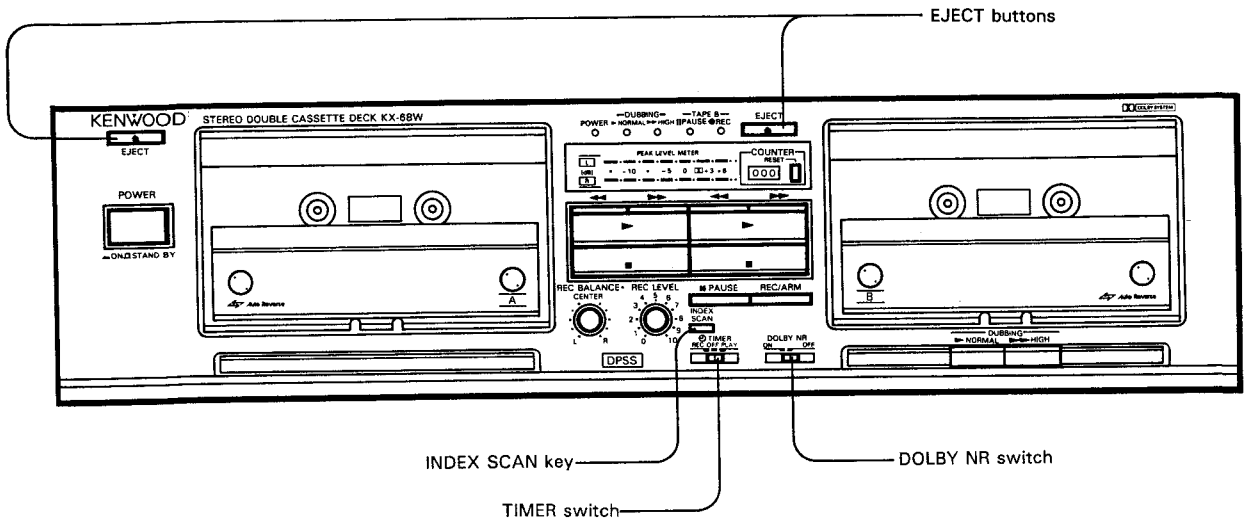
Press either the ◄◄ or ►► key when in the stop mode.

- The tape is either moved forward fast or rewound depending on the key pressed.
- When either ◄◄ or ►► key is pressed during PLAY, DPSS operates (see page 12).

■ Stopping playback

Press the stop (■) key.

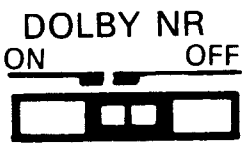
- Playback is stopped.
- The tape is stopped automatically at the end, or when it has been completely wound forward or rewound.



■ Relay playback operation

Tapes in the two decks (A and B) can be played alternately and repeatedly.

1. Set the deck's TIMER switch to OFF.



2. Press the EJECT (▲) button for each deck.
3. Insert a cassette tape in each deck and close the cassette holders securely.
4. Set the DOLBY NR switch according to the NR mode of the cassette tapes.

5. Press the play (►) key of the deck desired to be played first.

■ Index scan (A deck only)

1. Press the INDEX SCAN key. The tape is rapidly advanced while the beginning of each tune is played back for about 10 seconds.
2. When the desired tune is found, press the play (►). Normal playback operation will resume.

DPSS (direct program search system)

DPSS (direct program search system)
The DPSS function of the cassette deck allows you to perform the following convenient operations easily by a touch of the corresponding operation key. (Common to A and B decks).

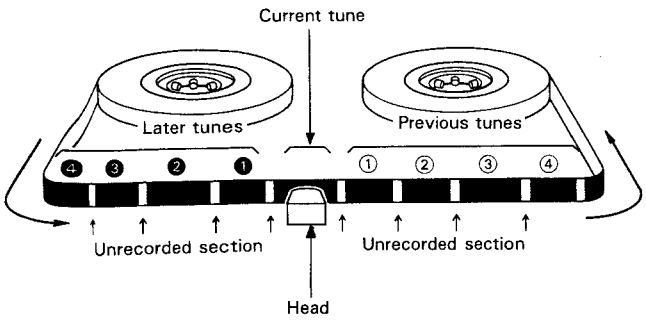
1. **Skip play**
2. **Single-tune repeat playback**
3. **Rewind and auto play**
4. **Re-Rec standby (when a recording needs to be restarted from the beginning)**
5. **Dash & play (when playing while fast-forwarded through non-recorded sections of more than 10 seconds)**

DPSS and non-recorded sections of tape (blank intervals)

The DPSS function works by detecting a non-recorded section (blank) of more than 4 seconds between tunes.
When making a new recording on a tape, the blank sections between programs should be made according to "How to provide non-recorded blanks between programs."
The function may not operate correctly when the following types of tape are used.

1. Tapes with conversation, etc. in which the sound is interrupted for more than 4 seconds.
2. Tapes having very low level sections or non-recorded sections in the middle of a tune, such as in some classical pieces.
3. Tapes in which high level noise is recorded between tunes.
4. Tapes having blank sections of less than 4 seconds between tunes.
5. Tapes recorded at an excessively low level.

DPSS selection



■ Skip play in the forward direction

Perform the following to play a tune which is several tunes ahead of the one currently being played.

During playback, press the fast forward (►►) key.

- The number of tunes skipped (maximum: 16) is equal to the number of times the key is pressed, after which playback of the target tune starts.

■ Skip play in the reverse direction

To play a tune located before the one currently being played, perform the following.

During playback, press the rewind (◄◄) key.

- The number of tunes skipped (maximum: 16) is equal to the number of times the key is pressed, after which playback of the target tune starts.

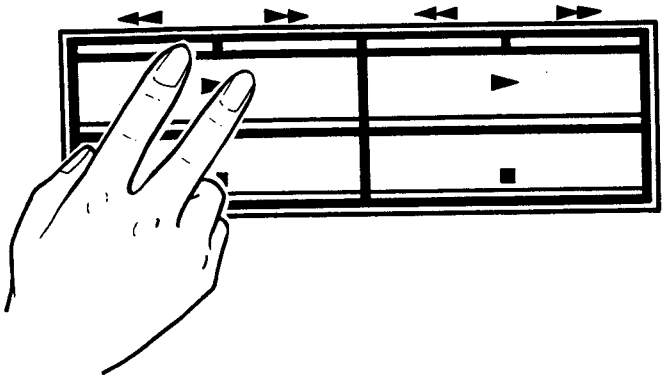
Note:
If the rewind (◄◄) key is pressed immediately after the start of a program, the current tune could be discounted and more tunes could be skipped than you want.

■ Single-tune repeat playback

This function is used to play back a desired tune repeatedly.

While a tune is being played back, press the play (►) key again.

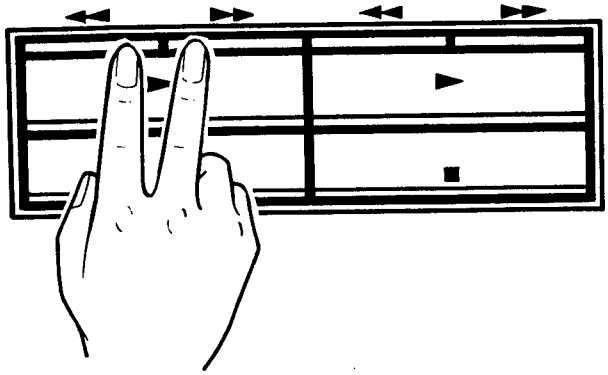
- The designated tune will be played back repeatedly 16 times, after which the deck will enter normal playback mode.
- To release single-tune repeat playback, press the stop (■) key.



■ Rewind & auto play

This function is used to automatically play the tape from the first tune after rewinding.

Press the play (►) key and rewind (◄◄) key simultaneously.



■ Dash & play

This function allows you to play a tape repeatedly by fast-forwarding through any non-recorded blank of more than 10 seconds on the tape.

Press the fast forward (►►) and rewind (◄◄) keys simultaneously.

- The deck enters the single-side full-repeat mode, and the current side of the tape is repeated 8 times.
- To cancel dash & play, press the stop (■) key.

Note:
If a non-recorded section is less than 10 seconds long, these functions may not work correctly.

■ Re-Rec standby (B deck only)

This function allows you to interrupt recording, return the tape to the position where recording started, and put the deck in the stop mode. This is useful when you have started a recording by mistake.
(In this case, a four second blank section is required before the position at which the recording is to start).

During recording, press the rewind (◄◄) key.

- Recording is interrupted, the tape is rewound to the correct starting point, a non-recorded blank of 2 seconds is made after the end of the previous program, and the deck enters the stop mode.

When starting to re-record

1. **Press the REC/ARM key twice in succession to make a new non-recorded blank.**

2. **Press the REC/ARM key again**
   - This starts a new recording.

■ How to provide non-recorded blanks between programs

To make a non-recorded blank of about 4 seconds:

Press the REC/ARM key twice in succession.

- After leaving a non-recorded blank of about 4 seconds, the deck enters the record-pause mode.

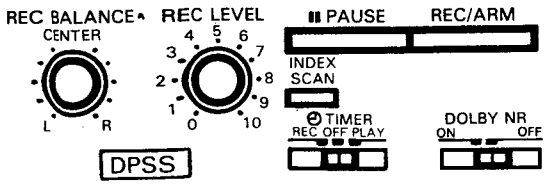
To make a non-recorded blank during recording:

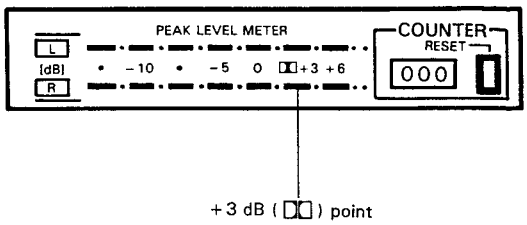
Press the REC/ARM key once during recording.

- After running to make a non-recorded blank of about 4 seconds from the point where the key is pressed, the deck enters the record-pause mode.

Note:
For normal recording operations, see the "How to record" section which starts on page 14.

How to record (for B deck only)





■ Preparation for recording

Preparatory settings

1. **Set the TIMER switch to OFF.**
2. **Press the EJECT (▲) button for B deck.**
3. **Insert a cassette, and close the cassette holder securely.**
   - The cassette deck automatically selects the standard recording conditions for chrome (CrO_2) tape, Metal tape, or normal tape.
4. **When DOLBY NR is required, set the DOLBY NR switch to ON.**

■ Usual recording operations

Recording level adjustment

After each of the settings is completed, set the recording level.

1. **Select the recording source with the amplifier's input selector, and start playing the source.**
2. **Press the PAUSE (II) key and REC/ARM key simultaneously to put the deck in the record-pause mode.**
3. **While observing the peak level meter, adjust the recording level with the REC LEVEL knob and REC BALANCE knob so that the +3 dB (□□) indicator lights occasionally.**

Starting recording

1. **Press the REC/ARM key.**
2. **Play the recording source.**
   - To momentarily stop recording, press the PAUSE (II) key.
   - At the end of recording, press the stop (■) key.
   - The tape is stopped automatically at the end of the designated side for recording.

Use of the counter (for B deck only)

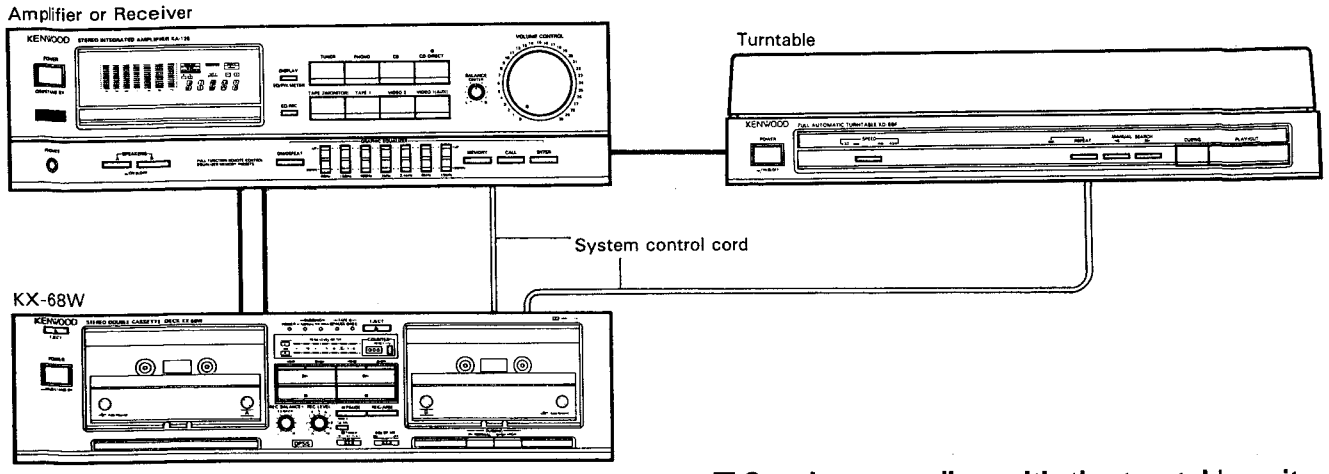
Press the counter's reset button before the start of recording to return the counter to 000. When recording stops before the end of a tape run, take note of the counter reading, and fast forward the tape to that position for subsequent recording.

Dolby noise reduction system

The Dolby noise reduction system was developed to reduce the tape hiss noise generated during play back.
The optimum effect of the Dolby NR system is obtained when the same type NR system is used for both recording and playback. If a different type NR system is used, playback is not performed correctly. Make sure that the same type noise reduction system is used for both recording and playback.

Dolby B-type NR: (Dolby B-type NR is the noise reduction system employed by this unit)
The most popular noise reduction system used in home audio components. Usually, Dolby NR system corresponds to B-type NR.

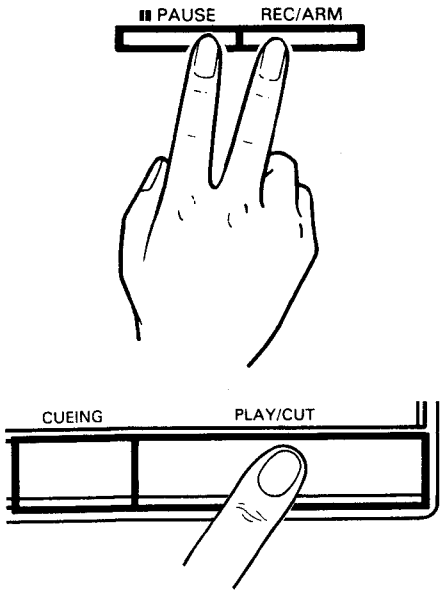
Synchro recording



■ Synchro recording with the turntable unit

By connecting the turntable (optional) with the system control cord, tape recording can be started in synchronism with the start of record play.

1. **Make the cassette deck ready for recording following the procedure in the "Preparation for recording" section.**
2. **Place a record on the turntable.**
3. **Following the procedure in the "Recording level adjustment" section, play the turntable and adjust the recording level.**
   - When the PHONO input selector of the amplifier is pressed, the turntable starts play automatically.
4. **After adjusting the recording level, set both the cassette deck and turntable in the stop mode.**
   - If the recording level has been set based on experience, steps 3 and 4 are not necessary.
5. **On B deck, press the REC/ARM key while holding the PAUSE (II) key depressed.**



6. **On the turntable, press the PLAY/CUT key.**
   - The turntable will start play and, at the same time, the cassette deck will start recording.

■ To pause synchro recording temporarily:

Press the CUEING key of the turntable.

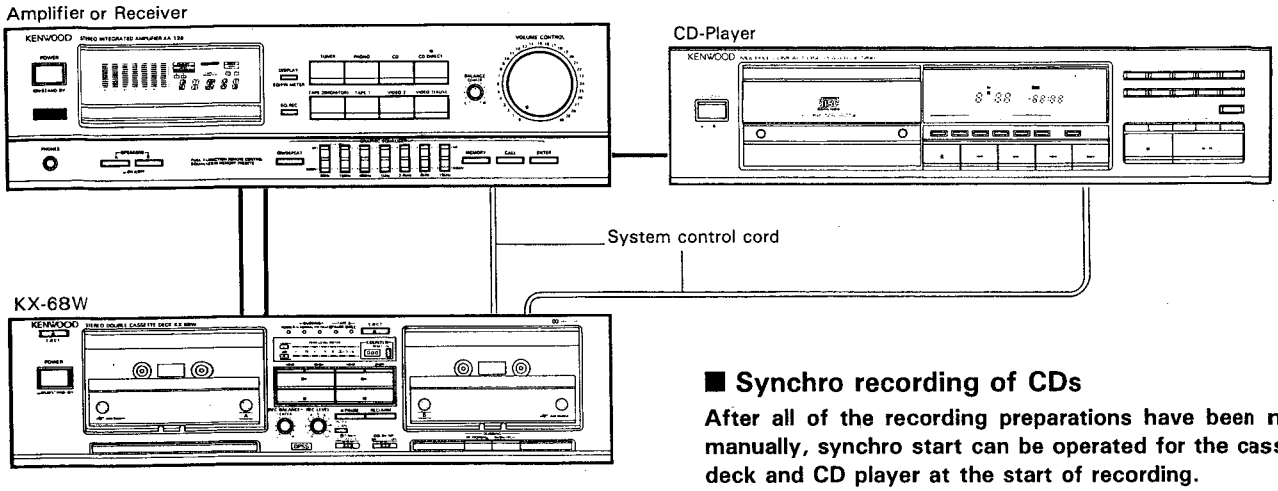
- The cassette deck will enter the record-pause mode after reserving a non-recorded blank of about 4 seconds.
- To resume recording press the CUEING key of the turntable again.

■ To stop synchro recording:

Press the PLAY/CUT key of the turntable.

- The turntable will stop record play, and the cassette deck will enter the stop mode after reserving a non-recorded blank of about 4 seconds.

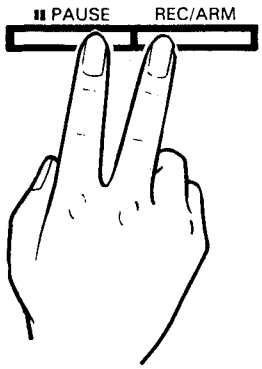
Synchro recording



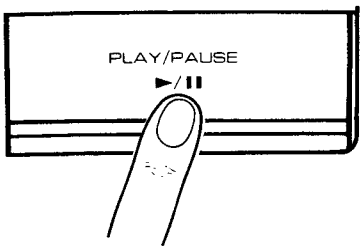
■ Synchro recording of CDs

After all of the recording preparations have been made manually, synchro start can be operated for the cassette deck and CD player at the start of recording.

1. **Make the necessary preparations in accordance with the section entitled "Preparation for recording".**
2. **Load a CD into the CD player.**
3. **Follow the procedure in the "Recording level adjustment" section while playing the CD to set the recording level.**
   - CD play starts automatically when the amplifier's input selector is set to CD.
4. **After setting the recording level, stop both the deck and CD player.**
   - If you have experience in setting the recording level, you can skip steps 3 and 4.
5. **While pressing the PAUSE (II) key, press the REC/ARM key.**
   - The deck enters the record-pause mode.



6. **Press the CD player's PLAY/PAUSE key.**
   - The cassette deck begins recording simultaneously with the start of CD playback.
   - At the end of CD playback, the cassette deck will enter the stop mode after reserving a non recorded blank of about 4 seconds.



■ Record-pause

Press the CD player's PLAY/PAUSE key.

- The deck makes a non-recorded blank of about 4 seconds, and goes into the record pause mode.
- Recording is resumed when the key is pressed again.

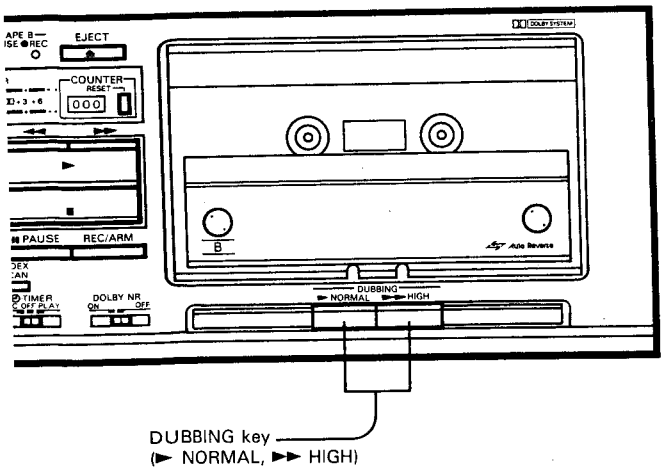
■ To stop recording

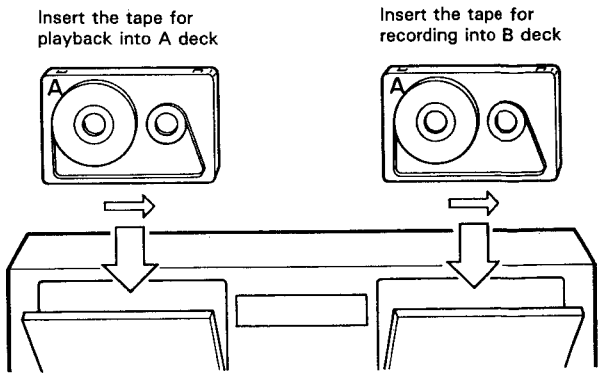
Press the STOP key on the CD player.

- The CD player will stop playback, and the cassete deck will enter the stop mode after reserving a non-recorded blank of about 4 seconds.

Dubbing operation (A→B deck only)

Dubbing is the operation for copying sound from a prerecorded tape to another tape.





■ Normal dubbing operation

1. **Set tapes in both the A and B decks as shown in the figure.**

2. **Press the ► NORMAL key.**
   - Dubbing from Deck A to Deck B starts.
   - If any of the Deck B operation keys is pressed during dubbing, dubbing is canceled, Deck B enter the mode selected by the key pressed, and Deck A enters the stop mode.
   - If any of the Deck A operation keys is pressed during dubbing, dubbing is temporarily paused, and Deck A enters the mode selected by the key pressed. Meanwhile, Deck B enters the record-pause mode after leaving a non-recorded blank of about 4 seconds.

3. **To end dubbing, press the stop (■) key of Deck B.**
   - Both Decks A and B enter the stop mode.

To temporarily pause dubbing:

Press the ► NORMAL key.

- Deck B enters the dubbing-pause mode after leaving a non-recorded blank of about 4 seconds.
- To re-start dubbing, press the ► NORMAL key again.

■ High-speed dubbing operation

Dubbing is performed in half the time required for normal dubbing.

1. **Set tapes in both the A and B decks as shown in the figure.**

2. **Press the ►► HIGH key.**

3. **To end high-speed dubbing, press the stop (■) key of Deck B.**

To temporarily pause dubbing:

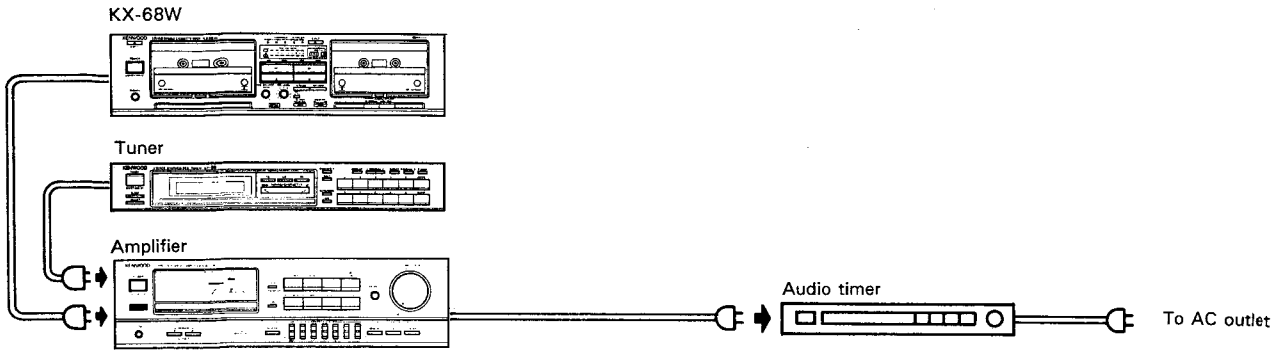
Press the ►► HIGH key.

- Deck B enters the dubbing-pause mode after leaving a non recorded blank of about 6 seconds.
- To re-start dubbing, press the ►► HIGH key again.

Note:

1. **The recording level cannot be adjusted for dubbing. Insert a tape that was recorded at an optimum recording level into the A deck.**
2. **Regardless of the position of the DOLBY NR switch the Dolby NR setup cannot be changed during dubbing. (A tape recorded by dubbing always will have the same Dolby NR mode as the A deck.)**
   Example:
   If the A deck tape was recorded using Dolby NR, the tape recorded in the B deck will also be recorded using Dolby NR.
3. **Repeated dubbing leads to degradation of sound quality. It is recommended that the prerecorded tape in the A deck be an original, first-generation tape.**
4. **When a TV set is placed near the system, the result of high-speed dubbing could contain noise from the TV. To avoid this, place the TV as far as possible from the system.**
5. **If the prerecorded tape was recorded at a relatively high recording level, the result of high-speed dubbing could be poor sound quality. Use normal dubbing with such tapes.**

Timer stand-by operation



By using the built-in TIMER STAND-BY mechanism in combination with an audio timer (available from many dealers), the deck can begin to record or play at any desired time.

■ Timer recording of radio broadcasts

1. **Connect the power cords to the components and set the timer so that power is supplied to each component. (Timer setting procedures vary with the type of timer used. Follow the instructions in the timer's manual.)**
2. **Turn on the power switches of the components to be used for recording.**
3. **Tune in the desired station and set the recording level.**
4. **Set the volume control of the amplifier to its minimum setting.**
5. **Set the timer to the required time referring to the timer's instruction manual so that the power will be switched ON at the preset time.**
6. **Load a tape for recording into B deck.**
7. **Set the DOLBY NR switch to ON if the recording is to be made using the noise reduction system.**
8. **Set the TIMER switch to REC.**

9. **Power to the components will be switched ON at the preset time and recording will start.**
10. **Recording stops when the end of the tape is reached.**

■ Timer playback

1. **Connect the timer as described in the "Timer recording of radio broadcasts" section.**
2. **Set the timer so that power is supplied to each of the components.**
3. **Turn on the power switches of the components to be used for playback.**
4. **Load a recorded tape and set each switch referring to the "Tape playback operation".**
5. **Adjust the volume control of the amplifier.**
6. **Rewind the tape to the start.**
7. **Set the timer to the required time.**
8. **Set the TIMER switch to PLAY.**

9. **The tape will automatically start playback at the preset time.**
   - If tapes are loaded into both the A and B decks, timer playback will begin with the B deck.

Notes:

1. **To ensure that the cassette deck's automatic shut-off switch operates before the power is shut off, set the timer so that it operates for a little longer than the playing time of the tape.**
2. **When operating the unit other than the CD player using an audio timer, be sure to remove the disc from the CD player.**

Note:

Do not use a timer for the dubbing procedure.

In case of difficulty

If your unit should not perform as expected, consult the table below to see if the problem can be corrected before seeking help from your dealer or service representative.

Symptom	Causes	Remedy
Recording is impossible by pressing the REC/ARM key.	1. The erase protection tab provided on the cassette shell is broken. 2. Cassette holder is not closed completely. 3. Recording level knob is set to its minimum position.	1. Use a cassette with an unbroken tab. (When recording using a cassette with a broken tab, block the hole with adhesive tape.) 2. Close the cassette holder completely. 3. Refer to the "How to record" section.
Sound is not heard even when the playback key is pressed.	1. Audio cords are connected incorrectly. 2. Head is dirty. 3. Tape cannot be advanced due to uneven winding. 4. Unrecorded tape is used.	1. Refer to the "System connections" section. 2. Refer to the "Cleaning the head section" section. 3. Replace the cassette. 4. Use a recorded tape.
Sound is husky or high frequency notes are not heard.	1. Head is dirty. 2. Tape is damaged.	1. Refer to the "Cleaning the head section" section. 2. Replace the cassette.
Sound is distorted.	1. Recording level is too high when recording. 2. Source itself is distorted.	Refer to the "How to record" section.
Too noisy	1. Head is magnetized. 2. Noise is induced from external equipment. 3. Recording level is too low. 4. DOLBY NR encoded tape is played back with DOLBY NR switch OFF.	1. Demagnetize the head using head eraser. 2. Keep the unit away from other electrical equipment. 3. Refer to the "How to record" section. 4. Set the DOLBY NR switch to ON. It is recommended to always perform recording with the DOLBY NR switch ON.
Sound contains wow and flutter.	1. Capstan or pinch roller is dirty. 2. Tape is wound unevenly.	1. Refer to the "Cleaning the head section" section. 2. Wind the tape again by fast-forwarding or rewinding.
Playback or recording starts when the power is turned ON.	TIMER switch is set to the PLAY or REC position.	Set the TIMER switch to OFF when the timer-playback or timer-recording function is not used.
The unit does not function when an operation key is pressed.	1. The operation key is pressed immediately after the power is turned on (before 3 seconds have elapsed). 2. Cassette tape is not loaded. 3. The tape cannot be wound (advanced) because the tape is wound unevenly.	1. After 3 seconds have elapsed since the power was turned ON, press the operation key. 2. Load a cassette. 3. Replace the cassette.
DPSS does not function correctly.	An unsuitable tape having short blank sections between tunes is used.	Refer to the "DPSS" section.
Operation is impossible by pressing any operation key.	1. Cassette holder is not closed completely. 2. An operation key is pressed immediately after the cassette holder is closed.	1. Close the cassette holder completely. 2. Wait a few seconds after closing the cassette holder before pressing an operation key.
Synchro operation does not occur.	1. The system control cord is not inserted securely. 2. The system control cord is not connected properly.	1. Insert the system control cord securely into the jacks. 2. Refer to the "System connections" section.

Notes:

- **According to the type of cassette tape, noise will sometimes be heard when the tape stops automatically. This is not a malfunction of the unit, but is caused to ensure the certain transport of the tape.**
- **120-minute cassette tapes are not unrecommended because they are too thin and may be demaged by repeated use.**

Specifications

Type	Stereo Full Logic Cassette Deck with Dolby B NR system
Track System	4-track, 2-channel stereo, recording/playback
Recording System	AC bias system (Bias frequency: 105 kHz)
Erasing System	AC system
Tape Speed	4.76 cm/sec (1-7/8 ips)
Heads	Playback/record head × 1 Playback head × 1 Erasing head × 1
Motor	DC motor × 2
Fast Winding Time	Approx. 90 seconds with C-60 tape
Frequency Response (±6 dB) – 20 dB recording:	
Normal Tape	20 Hz to 15,000 Hz
CrO_2 Tape	20 Hz to 16,000 Hz
Metal Tape	20 Hz to 16,000 Hz
Signal-to Noise Ratio:	
Dolby B Type NR ON	65 dB (Normal tape)
Dolby NR OFF	57 dB (Normal tape)
Harmonic Distortion	Less than 0.6% (at 1 kHz, 0 dB with normal tape)
Wow and Flutter	0.08% (W.R.M.S), 0.22% (DIN)
Input sensitivity/ Impedance:	
LINE IN	77.5 mV/50 kohms
Output Level/ Impedance:	
LINE OUT	270 mV/3.9 kohms
[GENERAL]	
Power Consumption	25 W
Dimensions	W: 440 mm (17-5/16″) H: 119 mm (4-11/16″) D: 268 mm (10-9/16″)
Weight (Net)	4.9 kg (10.8 lb)

Note:
KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Svenska **Observera:**
Apparatens strömförsörjning kopplas från sekundärt. V.g. ge akt på följande.

Apparaten frånkopplas inte helt och hållet från strömnätet medan apparatens nätsladd är ansluten till växelströmsuttaget.

Finnish **Huom:**
Virta yksikköön on kytketty pois sekundaaripuolelta. Huomioi seuraava.

Tämä yksikkö ei ole kokonaan kypketty pois pää virranjakajasta kun pää katkaisin on liitettynä virtatiiriin.

Dansh **Bemærk:**
Strømmen til apparatet afbrydes på den sekundære side. Vær opmærksom på følgende.

Denne enhed er ikke fullstendig koblet fra lysnettet så lenge stikket er tilsluttet stikkontakten.

Norwegian **Anmerkning:**
Strømmen til apparatet er slått av på sekundærsiden. Vær oppmerksom på det følgende.

Dette apparatet koples ikke fullstendig fra nettet så lenge støpselet står i en stikkontakt, selv om strømbryteren settes i av-stilling.